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ABSTRACT

A number of significant policy issues related to the use of competency tests in basic skills as a requirement for high school graduation are discussed. Issues contributing to the interest in this practice include test score decline, the widespread offering of electives in high school, the complaints of employers about the skill level of high school graduates, and the public mood. Competency testing is seen here as one requirement for high school graduation, and not as the sole basis for awarding a high school diploma. This new practice involves the following four elements: (1) the use of objective, criterion referenced competency tests, (2) the assessment of reading and computation skills using real life or life skill items, (3) the requirement of a specified mastery level for high school graduation, and (4) the early introduction of such testing for diagnostic identification and remediation. (MV)

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A REVIEW OF POLICY ISSUES RELATED TO COMPETENCY TESTING FOR HIGH SCHOOL GRADUATION*

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Introduction

This paper does not report data from an empirical study related to testing and prediction. It is concerned with another aspect of testing which fortunately in recent years has received increasing attention - the policy issues related to a particular type of testing. This paper will attempt to set forth a number of significant policy issues related to the use of competency tests in minimum or basic skills as a requirement for high school graduation.

The idea of competency testing for high school graduation is itself not an entirely new practice. The Denver school system is in its 15th year of such testing. The widespread interest in and rapid spread of this practice has been documented by the NASSP (1) and more recently by the NCES. (See attached NCES survey report - Attachment A.) Issues contributing to the attention given to this practice include test score decline, the widespread offering of electives in high school, the complaints of employers about the skill level of high school graduates, and the public mood. The recent Gallup poll (2) shows that approximately two thirds of the public surveyed in the 1976 poll on education agreed that all high school students in the United States should be required to pass a standard nationwide examination in order to get a high school diploma. In 1958, one half of those polled were of a similar persuasion.

This paper deals with competency testing as <u>one</u> requirement for high school graduation and <u>not</u> with the use of high school equivalency tests as the sole basis for awarding a high school diploma. Admittedly,

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these two forms of testing are closely related; for this reason, occasional references will be made to equivalency testing.

This paper builds on earlier works which include the NASSP's Competency Testing and Graduation Requirements (3), and papers by George Madaus and Peter Airasian (4), Richard Harsh (5), and William Spady (6). A 1975 NASSP task force report on Graduation Requirements (7) describes the low estate of the high school diploma, which is all too often looked upon merely as a certificate of attendance. The task force held "that the criteria for a high school diploma should be distinctive, representing an accomplishment independent of other factors . . . the diploma should certify that the graduate possesses the baseline skills and knowledge essential to an effective adult citizenship." The diploma would, in effect, document the student's acquisition of certain knowledge and skills

This new practice involves, as a rule, the following four elements: 1) the use of objective, criterion referenced competency tests, 2) the assessment of reading and computation using "real life" or "life skill" items, 3) the requirement of a specified mastery level for high school graduation, and 4) the early introduction of such testing for purposes of identification and remediation. Each of these elements raises its own set of questions or issues.

Criterion Referenced Competency Tests

While criterion referenced testing is certainly not new, the concept of "competency" testing does represent a new ingredient in the mainstream of high school requirements. Without incorporating the precise terminology proposed by Spady, suffice it to say that a competency is a set of skills

that are necessary to meet the demands of a life role. Minimum competencies describe the skills needed to meet the lowest common denominator in life role demands for adults in this society. In most instances, these minimum competencies are limited to reading and math skills. Madaus and Airasian discuss at length the pitfalls in attempting to require a broad range of cognitive and affective learnings as minimum or survival competencies. Clearly, what cannot be tested with high reliability should not become a requirement for high school graduation.

The introduction of a competency based high school graduation requirement introduces a shift in the way in which educational decisions are made. Since the advent of the Carnegie unit early in this century, high schools have awarded diplomas based on process criteria and "private" teacher judgements. The student needed to take a sufficient number of courses and needed to receive from the teachers in these courses, based on the teachers' own "private" criteria and judgement, a passing grade. Thus, a student who passed all four years of English would still need to pass the reading competency test.

In the present system, standard setting has taken place in each classroom with the teacher deciding who passes and fails. With objective testing, standard setting becomes a public process. Presumably, teachers will and should have a large hand in this public standard setting process. One recommended approach to standard setting calls for teachers to rate students as "below" and "above" a minimum competency level, which is described in terms of "the ability to do such and such." The cut-off score on the test is thus set at the point or interval which separates the "below" and the "above" groups. With this method, the standard is determined by a consensus of teacher judgements. Schools that now use cooperatively developed

departmental examinations have a "leg up" on the competency testing movement. In fact, cooperatively developed criterion referenced departmental examinations would constitute a workable competency testing program.

A recent article in the Phi Delta Kappan (8) lodged a host of complaints against the California Proficiency Test, a high school equivalency test developed and administered by the state. One of the complaints against this proficiency test program was that it usurped the standard setting perogative of local districts and faculties.

The 1974 Maine Assessment (9) included a sub-study in which teachers were asked to make three estimates of statewide student performance - the minimum acceptable outcome, the desired outcome, and the predicted outcome. The accuracy of the average predicted outcome when compared to the actual average performance argues for the usefulness of the consensus of teacher judgement. The range of individual teacher differences likewise argues for the usefulness of consensus ratings as opposed to individual decisions in standard setting.

The Use of "Real Life" Items

A common, though not essential, feature of the new competency tests for high school graduation is the use of items drawn from out of school settings. These items emphasize immediately usable skills needed for job seeking and consumer activities and basic citizenship skills needed for tax paying and voting. Exercises in ballot reading, the completion of applications, want-ad reading and computing interest on a loan become the typical fare. Immediacy is the rule here. This shift from "academic" to "real life" items raises several questions - is there any difference between these two kinds of skills? Do the students who show mastery on one kind of item tend to show mastery on the other as well? If a test containing both kinds of items were subjected

to a factor analysis, would two distinct factors emerge - one to be labeled "academic skills" and the other "real life" skills?

Another element to be considered in the use of "real life" items in these competency tests is that these real life items are being administered in a school setting - as part of a school requirement. No student will actually lose a job and lose money on an unfair loan by doing poorly on "real life" items in a school test. An individual's performance on a "real life" item in a school test might compare to his or her performance in a real life setting the same way the performance of a field goal kicker in practice might compare to his or her kicking a field goal in the fourth quarter of a close game.

The emphasis on life skills represents an emphasis on the socio-economic purposes of schooling. This emphasis might be seen by some as moving the classical concept of education - the development of the "educated person" somewhere into the twilight. A conservative British author, Michael Oakeshott, described at length what he sees as the substitution for education of some other and almost totally different idea of apprenticeship to adult life - a socialization process designed to meet the needs of an industrial society. According to Oakeshott, what was designed in the 19th century as an alternative to education, a basic skills training offered to the poor, has now come to be called education.

> "Since it has long ago ceased to be merely the equipment of the neglected poor to make a greater and more various contribution to the well being of the 'nation', other reasons have had to be found in terms of which to defend and to make intelligible this alternative to education, especially in its second stage (i.e., vocational education). For the most part these have drawn upon the beliefs that the 'needs of the nation' can be satisfied in no other way and that there are children for whom the ardours of education would be an unprofitable engagement; but in some quarters these have been supplemented by the assertion that this is itself education and not an alternative to it." (10)

While the tone of Oakeshott's comments might sound somewhat dated, he does raise some noteworthy questions. Does the liberal arts approach which seeks to open many doors and include a wide range of worthwhile experiences, unduly distract less proficient students from the acquisition of basic skills? Should "education" for these students be limited, for all practical purposes, to the acquisition of these basic skills? On the other hand, can students who lack these basic skills in reading and computation profitably take part in a broader ranging liberal arts program? As competency requirements increase the focus on basic skills for less proficient students, these questions become more urgent.

As a side benefit, this movement toward life skills assessment might call forth from liberal arts proponents a clearer formulation of the "real life" value of a liberal education at the high school level.

As will be noted again later, most discussions of the introduction of a life skills competency test requirement make clear that this requirement is only one of several. The basic skills requirement does not define the whole of secondary education. (One of the complaints against the California equivalency test is that a passing score on a life skills test serves as the equivalency of a high school education.) At the same time, for a number of students, in some schools perhaps the majority of students, meeting this basic skills requirement will be their major preoccupation for four years of high school. A recent administration of a competency test in a West Palm Beach, Florida school showed 8 percent of the white students and 56 percent of the minority group students failing. Groupings and narrowly focused programs could easily result from the introduction of this requirement.

Performance Requirements for High School Graduation

The high school diploma represents the completion of a program that is prescribed by the local school district in accordance with general guidelines established by the state. The introduction of performance requirements raises the question of state and local control in regard to the skill or subject areas covered by the requirement and the level of mastery required. Several options can be identified. The state might specify the basic skill areas and allow the local districts to set mastery levels; the state might require a specific level of performance on one or more state approved measures in specified areas; the state might decide that the whole question is a local issue; or the state might establish its own required test and passing score. These are but some of the options.

The introduction of an objective performance requirement would affect social promotions and the graduation of handicapped students. The term "social promotion" suggests that some students are graduated for reasons other than evident competence. An objective test with an established passing score requirement would mark the end of social promotions. At present, the reliance on process criteria and "private" teacher judgements allows more consideration to be given to students who try hard and show up regularly; to that extent, the present system is more flexible, some would say it is more humane. Handicapped students can be graduated according to this system without any need for a special diploma; teachers generally assess these students in terms of their performance making allowance for their handicap. Students from disadvantaged backgrounds and handicapped students will undoubtedly have the most difficulty with a new objective competency test requirement,

which by its very nature does not admit of flexibility. Options here include multiple diplomas or the exemption from the requirement of those students who have been formally designated as "special needs" students.

The fear is often expressed that a minimum requirement, such as a basic skills competency requirement, might become, in effect, the requirement for graduation. The minimum would thus become the maximum. A glance at the STEP II norm table (11) shows that what 80% of the high school seniors can do in mathematics computation, 65% of the freshman can also do. A standard that might well be a fair minimum expected of all seniors could be met by a sizeable number of freshmen. Even with local course requirements still in force, something more significant that the acquisition of the diploma must motivate these competent students. For some, it might be admission to college - itself a less demanding challenge in recent years. To motivate the more able students, some have proposed different types of diplomas based on various demonstrated levels of proficiency (12) and different course requirements. This arrangement, more in vogue in years past, has been found objectionable by many because of its elitist connotations. Considerations of excellence and equality are often in tension.

Looking now in another direction, the requirement of demonstrated competence in basic skills for a high school diploma might discourage some students, who are deficient in basic skills but, nevertheless, value the school experience and the acquisition of the diploma for other than academic reasons - i.e., as an indicator of social acceptance, good behavior, and dependability. These students might size up their chances on the test and decide to drop out of school, figuring that what they could not learn

by grade 10, they cannot learn in grades 11 and 12. There are other problems with a hard and fast performance requirement. Noting that the special education profession, at times, insists that the diploma (not a special diploma) be awarded to special education students on the basis of their completing their individual prescribed program, several principals have shrewdly suggested that all students who have trouble with the competency test be declared special education students and be placed on a special program. This would enable all students to receive the diploma at the end of grade 12, competency test or no competency test. An entirely different set of issues are raised by bilingual educators. Should reading and writing English - or simply reading and writing - be required for a high school diploma in every city in the U.S.?

Early Testing for Identification and Remediation

Most proposals for a competency test for high school graduation call for the administration of the test at the ninth or tenth grade. This would allow the student sufficient time and opportunity to remediate the deficiencies revealed by the required test, supplemented, perhaps, by additional diagnostic testing. Students who exhibit requisite competencies at grade 9 or 10 would be free to pursue other studies. For these "competent" students, some attention might still need to be given to the maintenance of basic skill competencies, especially when their work in the final two or three years does not require the exercise of all the basic skills.

The early use of the competency test rests on the main premise of mastery learning, that, given additional time and resources, all students can be brought to a reasonable level of competence - which would certainly include basic skill competence. Not much attention has been paid in

this basic skills assessment movement to exactly what forms this high school level remediation would take and just why this remediation would be successful where earlier efforts were not. This movement does seem to assume that more attention i.e., time and resources, would be addressed to basic skill acquisition and that student motivation for skill learning would be heightened by this new graduation requirement. These may, indeed, prove to be valid assumptions.

The frequently advanced proposal to introduce the basic skills competency test as early as grade six presents a special problem. Bright sixth graders might well pass the basic skills test. A stigma, however, would then be inflicted on high school juniors and seniors who are still struggling to achieve a level of competence that some sixth graders already possess. The wide variations in human abilities, compounded as they are by extreme variations in family backgrounds, must be realistically taken into account. It would be unmerciful to create a system in which destructive comparisons could readily be made between sixth graders and 11th and 12th graders in a district or even in a state. Somehow, it would seem far less harmful if the comparisons involved only high school level students.

The problem of early identification in the primary and middle grades, of students who would probably have difficulty in high school with a basic skills competency requirement might prove to be no problem at all. Teachers have probably already identified these students and their problems. As Bracht and Hopkins have reported, early performance clearly predicts later performance. In their 1970 study, "the eight year stability (grades 3 to 11) of composite achievement score was .82; thus about 67% of the variance of eleventh grade achievement was predictable from third grade achievement. . . About 81% of the variance of eleventh grade achievement was predictable from seventh grade achievement." (13) The effective use of test data

already collected on elementary school students would seem to be the most logical approach to early identification and remediation at this level. Local studies could demonstrate the degree to which the elementary achievement tests predict later success on the high school competency test.

With the dramatic variation between schools and school districts, as shown by urban and suburban differences in various state assessments, a school or school district, as mentioned earlier, might well prefer to develop its own competency assessment program which, in a suburban district for example, might go well beyond the basic requirements that might be established, say, statewide. Local studies could show that successful completion of the local competency requirement more than fulfills the statewide requirement. In this situation, the local school or district should, perhaps, enjoy the freedom of taking or omitting the more general competency test. It might be argued that both measures should be used as a double check. At present, college admissions testing serves, in effect, as a competency test program for the college bound students, which include the great majority of students in suburban school districts.

Summary Conclusion

The following then are among the policy questions raised by the advent of competency testing for high school graduation as defined above.

- Should teacher judgement be supplemented by specific external performance criteria in awarding high school diplomas?
- Should high school graduation requirements in part be based on "real life" as opposed to academic skills and knowledge?
- Who has the final responsibility to determine the specific requirements for graduation in a high school - the faculty, the school board or committee, the state department?

- Should special needs students be exempted from minimum requirements or awarded special diplomas?
- Should external requirements be imposed that might prevent a substantial number and perhaps the majority of students from receiving a diploma in a given high school?
- Would specific minimum requirements soon be construed as the requirements, i.e., the minimum become the maximum.
- Should competency in reading and writing English be a requirement for a high school diploma in all U.S. high schools?
- To what extent does a competency test as a graduation requirement contribute to the development of more effective teaching and learning in the areas tested?

These are some of the principal questions raised by the movement toward competency testing for high school graduation.

George Elford
Educational Testing Service
Wellesley Hills, Massachusetts

(1) National Association of Secondary School Principals, Competency Tests and Graduation Requirements, (NASSP, Reston, VA) 1976.

(2) George Gallup, "Eighth Annual Poll of the Public's Attitudes Toward the Public Schools" Phi Delta Kappan, 58:2, Oct. '76, p. 187 ff.

(3) NASSP, op. cit.

(4) George Madaus and Peter Airasian, "Issues in Evaluating Student Outcomes in Competency-Based Graduation Programs", (unpublished paper) Boston College.

(5) J. Richard Harsh, "Considerations for Proficiency/Competency Testing", (unpublished paper) Educational Testing Service, Los Angeles Office.

(6) William Spady, "Competency Based Education: A Bandwagon in Search of a Definition", Educational Researcher, vol. 6:1, January, 1977.

William Spady and Douglas Mitchell, "Competency Based Education: Organizational Issues and Implications", Educational Researcher, vol. 6:2, February, 1977.

(7) Graduation Requirements, (Special Task Force Report) NASSP, Reston, VA, 1975.

(8) John Marlowe, "Testing, Testing...Can You Hear Me," Phi Delta Kappan, 58:3, November, 1976, p. 256-257.

(9) Maine Assessment of Education Progress Results Report, Reading and Writing, 1974, p. 50-58.

(10) Michael Oakeshott in R.F. Dearden, et al., Education and the Development of Reason, London: Routledge and Kegan Paul, 1972, p. 38.

(11) Handbook for STEP Series II, Princeton, ETS.

(12) As used here, the term "competency" describes a performance level that is sufficient or adequate for a certain purpose; "proficiency" describes a continuum of capability ranging from competency to expertness.

(13) Glenn H. Bracht and Kenneth J. Hopkins, "Stability of Educational Achievement, in G.H. Brail, et al., Perspectives in Educational and Psychological Measurement, Englewood Cliffs, Prentice Hall, 1972, p. 257-258.

APPENDIX II

SURVEY FORM WITH NATIONAL TOTALS

Fast Response Survey System

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
EDUCATION DIVISION
NATIONAL CENTER FOR EDUCATION STATISTICS
WASHINGTON, D.C. 20208

FORM APPROVED
OMB NO. 51-R1191

Dear FRSS State Coordinator:

There is a growing interest throughout the educational community in the concept of performance-based education, involving standards for measuring evidence of student achievement, or standards of "competency." The criteria may include minimum standards in the basic skills of reading, writing, and mathematics and in the life skills, that is, the demonstrable capabilities to complete tasks faced in adult life, such as filling out a job application or keeping a checkbook. The following questions, jointly sponsored by NCES and NIE, are designed to provide a nationwide, State-by-State overview of the current status of efforts to develop and implement basic skills and/or life skills standards and programs, and to highlight areas in which research and development are needed.

This survey has been coordinated with the Fast Response Panel of the CEIS Data Acquisition Subcommittee. Please complete the questionnaire below. You need not return the questionnaire. A representative of the NCES contractor (WESTAT, Inc.) will telephone you on to record your responses. If you have any questions, or if you wish to telephone your responses early, please contact Ed Krantz at 301-881-5310.

Sincerely yours,

Marie D. Eldridge

Marie D. Eldridge, Administrator
National Center for Education Statistics

SEA SURVEY OF DEVELOPMENTS IN PERFORMANCE-BASED EDUCATION

This report is authorized by law (20 U.S.C. 1221 e-1). While you are not required to respond, your cooperation is needed to make the results of this survey comprehensive, accurate and timely.

1. IN YOUR STATE, WHAT IS THE STATUS OF STATEWIDE STANDARDS AND/OR CRITERIA FOR PERFORMANCE-BASED PROMOTION OR GRADUATION FROM ELEMENTARY AND SECONDARY SCHOOLS? (Check one box in each row.)

SKILLS	IN PLANNING	DEVELOPED BUT NOT IMPLEMENTED	OPERATIONAL	NO PLANS
A. BASIC	23	1	5 *	22
B. LIFE	18	2	4	27

If you checked "NO PLANS" for both basic skills and life skills in question 1, then skip question 2 and go directly to question 3. Otherwise, answer both questions 2 and 3.

2. DOES THE FORMULATION OF THIS STATE PROGRAM FOR PERFORMANCE-BASED EDUCATION REQUIRE OR INVOLVE ANY OF THE ITEMS IN THE LIST BELOW? (Check your response under the column labeled "QUESTION 2.")

3. IN YOUR OPINION, HOW IMPORTANT IS THE NEED FOR FURTHER RESEARCH AND DEVELOPMENT FOR EACH ITEM IN THE LIST BELOW? (Check one category for each item in the column labeled "QUESTION 3.")

QUESTION 2		ITEMS	QUESTION 3		
YES	NO		URGENT NEED	DESIRABLE	NOT NEEDED
25	2	A. NEW PROMOTION OR GRADUATION STANDARDS THAT ARE PERFORMANCE-BASED RATHER THAN COURSE- OR TIME-BASED	22	27	1
5	19	B. NEW PROFICIENCY TESTS FOR HIGH SCHOOL ENTRANCE	3	19	28
22	5	C. NEW PROFICIENCY TESTS FOR HIGH SCHOOL GRADUATION	22	18	9
20	7	D. PROVISIONS FOR "EARLY EXIT" FROM HIGH SCHOOL	10	32	6
24	3	E. NEW OR REVISED PROGRAMS AND/OR COURSES	19	24	5
24	3	F. MULTIPLE OPPORTUNITIES TO PASS A REQUIRED TEST OF COMPETENCE	21	21	6
22	5	G. OUT-OF-SCHOOL LEARNING OPPORTUNITIES	24	22	3
11	15	H. NEW PERFORMANCE-BASED STANDARDS FOR TEACHERS	16	27	5
16	8	I. PROVISION OF STATE RESOURCES FOR LOCAL PROGRAM IMPLEMENTATION	17	25	5
22	4	J. LOCAL OPTIONS IN DETERMINING PERFORMANCE STANDARDS OR CRITERIA	25	19	4
21	6	K. PRODUCTION AND USE OF RESEARCH INFORMATION TO ASSIST ADMINISTRATORS, LEGISLATORS, AND COURTS IN FORMULATING PERFORMANCE-BASED EDUCATION DECISIONS	26	19	3
3	1	L. OTHER (specify)	4	1	0

NCES FORM 2379-1, 7/79

*Arizona
California
New York
Oregon
Texas